Work Orde <i>May-13-13 1:12.</i>		101694		*101	1694*					Page 1
Item ID: Revision ID:	D2972		,	Accept	*N900	004010) () *	Setup Star	*N	S1*
	Bushing							Stop	*N	S2*
Start Date:	5/13/13	Start Qty: 12.00	*12*		Cust Item	ID:				
Required Date: 5	5/31/13	Req'd Qty: 12.00	*12*		Customer					
Reference:										
Approvals:	Process	Plan: MUS	Date: 13-05-14	Tooling:	·	Date:	h	Run Star	171	R1*
	QC:	•	Date:	SPC (Y/N):	I	Date:	_	Stop	*N	R2*
Sequence ID/ Work Center ID		Operation Description		Set Up/ Run Hours	Tool ID	Tool # Pla		Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	I	Revision Nbr								
D2972	F	Rev A1								
100				0.00		9 1 L	12	j		DA 04
100 Hardinge		· Memo		0.00		3.6.6		<u> </u>		- ∞ 89
Hardinge CNC Lathe	Small	Memo .								
					,	. *				
						_				DAG
110		QC2- Inspect parts off m	achine FAI/FAIB	0.00		13.6.6	12	ď		04
*11 0 *		Memo		0.00						89
Quality Control										
•										
120		QC8- Inspect parts - seco	ond check	0.00						
120				Ps.	13/06/0	7	12	Ø		
QC Quality Control		Memo		0.00	- 5, , , -	•		,		

NCR: Y	'es	/ No				WORK ORDER NON-C	10 0	NFORI	MANCE / UP	DATE			
									•		QA Closed:	Date	e:
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	_					Rework Scrap Use-as-is Work Order Update	-	Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
NCK I	··· –					work Order Opdate	,		rarge ran	Composite	1	20philei [
Root				Descri	ption of work order update	1	nitial	Act	tion	Sign &			
Cause	\perp	Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data	\Box												
Equip/Tooling	\Box		-										
Operator	\Box												
Material	Ц								,				
Setup	\Box												
Other	\Box												
Process	Ц					,							
Supplier	Щ												
Training					:								
Unapproved			<u></u>				<u> </u>				ļ		
							AUL	T CATE	GORY				
Landi						General		ا ما			1	г	7. /5. /
		Bending			- /c	Bend	\vdash	Grain		<u> </u>	Ovalized	<u> </u>	Pressure/Forced
		Centre No	ot Concei	ntric to (⁻ -	BOM/Route	\vdash	Hardwa		<u> </u>	Over/Under		Temperature/Cure Weld
	\vdash	Cracks	C		-	Broken/Damaged	\vdash	1	ion Incomplete	Undoor	Part Incorred Part Lost/Mi	-	Wrong Stock Pulled
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	Cuffs Heat Treat		Countersink	\vdash	Mislabe		-	Positioned V	Vrong				
		nspection		Tuhe	<u> </u>	Cut Too Short	\vdash	Misread		 	Power Loss/		Other
,	_	Ripples in		IUNC	<u> </u>	Drill Holes	\vdash	Offset	•	<u> </u>	1. 044-01 2033/	8~ L	Touri
	$\boldsymbol{\vdash}$	Torque W		xtrusio	,	Drawing	\vdash	ł	Calibration				
		Turning S			·	Finish	\vdash	i	Sequence		4		·
	, 1		-,			• ***				•			

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ord <i>May-13-13 1:</i>		01694		*101	1694*				Page 2
Item ID: Revision ID: Item Name:	D2972 Bushing			Accept	*N900	04010	n* s	Stop	1421
Start Date: Required Date Reference:	5/13/13 e: 5/31/13	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*		Cust Item II Customer:	D:			
Approvals:	Process F	Plan:	Date:	Tooling: SPC (Y/N):		nte:	- -	Run Start Stop	"IVIR I"
Sequence ID/ Work Center 130 *120* Packaging Packaging	ID	Operation Description Memo		Set Up/ Run Hours 0.00	Tool ID	Tool # Plan Code	Accept Qty	-	Reject Insp. Number Stamp
140 *140* QC Quality Control		QC21- Final Inspection - Memo	Work Order Release	0.00				13,	16/10 D

											DQA:	Date	:
NCR:	Yes	/ No				WORK ORDER NON-C	100	NFORM	MANCE / UP	DATE			
											QA Closed:	Date	
Work Orde	or.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Work Ordi	C1.					Rework	ıl		Skid-tube	Crosstube]	Water Jet	Engineering
Part!	Nο					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality
, , ,	, , ,	- "	· · · · · · · · · · · · · · · · · · ·			Use-as-is			noforming	Finishing	4	re/Packaging	Other
NCR I	No.		·			Work Order Update			Large Fab	Composite	1	Supplier	1
	•				· · · · · · · · · · · · · · · · · · ·	' L	,		• Ш	· L			
Root			`		Descri	otion of work order update		Initial	Ac	ction	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data	Ш												
Equip/Tooling													
Operator													
Material	Ш												
Setup	Ш												
Other						÷							
Process	Ш				-								
Supplier	Ľ				•	•	1						
Training	Ш												
Unapproved			<u> </u>		L	·							
							AUL	T CATE	GORY				
Landi	ing (General		1		_	1	_	.
	<u> </u>	Bending			. -	Bend	<u> </u>	Grain			Ovalized		Pressure/Forced
	<u> </u>	Centre No	ot Concer	ntric to	o/s _	BOM/Route	<u> </u>	Hardwa		<u> </u>	Over/Under	. —	Temperature/Cure
	-	Cracks			_	Broken/Damaged	<u> </u>	1 '	on incomplete		Part Incorre		Weld
		Crushed/	Crimped			Burrs	<u> </u>	1	ions Incomplete/	'Unclear	Part Lost/M	ssing	Wrong Stock Pulled
	\vdash	Cuffs			<u> </u>	Contamination	<u> </u>	Mainte		<u> </u>	Part Moved		
	<u>_</u>	Heat Trea	-		\vdash	Countersink	\vdash	Mislabe		<u> </u>	Positioned V		1
l		Inspection	n Strip in	Tube		Cut Too Short	1	Misread			Power Loss/	Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

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Page 1

Work Order ID:

101694

Parent Item:

D2972

Parent Item Name:

Bushing

Start Date: 5/13/13

Required Date: 5/31/13

Start Qty: 12.00

Required Qty: 12.00

Comments:

IPP A00.05.18New IssueEC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303R1.000 303 Round Bar 1.00		Purchased	No				f	86.3243		1.2			
				Location		Loc Qty	<u>Lo</u>	c Code					
				MAT028		86.32431579							
				120	866	1.4							
				121	070	6.63031579							
				121	282	0.9			~				
				121	728	3.034							
				122	386	14.926							
				123	294	5					~	1	
				124	71)	54.434		*	<u></u>	1.12	انحرا	6.6	

											DQA:	Date	e:
NCR:	Yes /	/ No				WORK ORDER NON-C	100	NFORI	MANCE / UPDATE		•		
											QA Closed:	Date	2:
Work Orde	o ė.					DISPOSITION			AGAINS	T DE	PARTMENT	PROCESS	
WORK OTU	ei. —					Rework	1		Skid-tube Crosstube	\Box	7	Water Jet	Engineering
Part i	No					Scrap			Machining Small Fal	<u> </u>	Pro	d. Eng. Coor.	Quality
l alti	10	· · · · · · · · · · · · · · · · · · ·				Use-as-is	1	ł	noforming Finishin	-	4	e/Packaging	Other
NCR I	No.					Work Order Update		i	Large Fab Composite	~ —	1	Supplier	
	-					'	1		·		<u></u>		<u> </u>
Root					Descri	ption of work order update		Initial	Action		Sign &	- -	
Cause		Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling	Ш						l					•	
Operator	Ш				ŧ								
Material	Ш				i I								
Setup	Ш					•							
Other	Ш												·
Process	Ш			. `									
Supplier	Ш								,				
Training	Ш												
Unapproved				.	<u> </u>		丄				<u> </u>		<u> </u>
							AUL	LT CATE	GORY				
Landi	ng Ge					General	_	7		_	3	<u></u>	- 1 .
	$\boldsymbol{\vdash}$	ending				Bend	\vdash	Grain		\vdash	Ovalized		Pressure/Forced
	_		ot Concer	ntric to	o/s	BOM/Route	\vdash	Hardwa		\vdash	Over/Under	 	Temperature/Cure
	\vdash	racks				Broken/Damaged	\vdash	-1	ion Incomplete	\perp	Part Incorred) 	Weld
		rushed/0	Crimped		<u> </u>	Burrs	\perp	-1	ions Incomplete/Unclear		Part Lost/Mis	ssing	Wrong Stock Pulled
	Шс	uffs				Contamination		Mainte	enance	<u>_</u>	Part Moved		
	н	leat Trea	t			Countersink		Mislabe	eled	1	Positioned W	/rong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

Folio

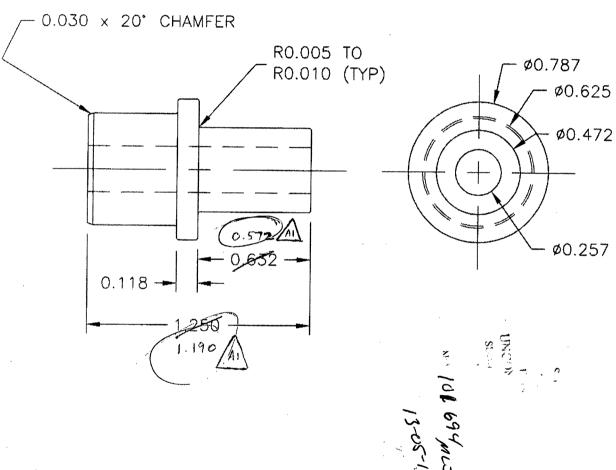
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DESIGN	DRAWN BY	DART	AEROSPACE BELLEVUE, WA	USA,	INC.
CHECKED	APPROVED	DRAWING NO.		SH	REV. A
DATE		TITLE		***************************************	SCALE
00.03.13		BUSHING			2:1
A	00.03.13	NEW ISSU	JE		





MATERIAL: AISI 303 STAINLESS STEEL. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED RADIUS ALL INSIDE EDGES 0.005 TO 0.010 BREAK ALL UNMARKED SHARP EDGES 0.010 TO 0.020 ALL DIMENSIONS ARE IN INCHES

CETUCE LENGTH OF BUSHING A CP AL 01 03 12

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DART AEROSPACE LTD	Work Order: 101694
Description: Bushing	Part Number: D2972
Inspection Dwg: D2972 Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X	First Article	Prototype
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Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.030 x 20°	+/-0.010 x +/-0.5°	20×20	6		PPOZ	
R0.005 - 0.010	N/A	1.008			ę	
0.572	+/-0.010	-574		-	1,	
0.118	+/-0.010	. 120			دا	
1.190	+/-0.010	1-190			c ₁	
Ø0.787	+/-0.010	- 786			c ₁	
Ø0.625	+/-0.010	.621			۲,	
Ø0.472	+/-0.010	. 472		/	11	
Ø0.257	+0.006/-0.001	.257			(,	
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Measured by:	04	Audited by:	80	Prototype Approval:	N/A
Date:	13-6.6	Date:	13/06/07	Date:	N/A

	Rev	Date	Change	Revised by	Approved
į	Α	07.11.23	New Issue	KJ/EC/DD	13/
				771	